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ABSTRACT

A semiconductor device (1) comprising electrodes  
formed on a semiconductor chip (2) and bumps (3) which  
5 consist of a low melting point metal ball spherically  
formed and having a given size and which are adhesive  
bonded to the electrodes (5). The electrodes (5) are  
formed from an electrode material of Cu or a Cu alloy, Al  
or an Al alloy, or Au or a Au alloy. When the electrode  
10 material is composed of Al or an Al alloy, the electrodes  
contain, on the electrode material layer of Al or an Al  
alloy, at least one layer (6) composed of a metal or metal  
alloy (preferably a metal selected from Ti, W, Ni, Cr, Au,  
Pd, Cu, Pt, Ag, Sn or Pb, or an alloy of these metals)  
15 having a melting point higher than the electrode material.  
The low melting point metal balls (3) are adhesive bonded  
to the electrodes (5) preferably with a flux. The low  
melting point metal balls (3) adhesive bonded to the  
respective electrodes (3) may also be reflowed to form  
20 semispherical bumps (10) before use.